

**REMARKS**

Applicants respectfully request favorable reconsideration of this application, as amended.

Claims 7-9 and 11-17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Polaschegg (U.S. Patent No. 5,098,373).

Without acceding to the outstanding rejections, independent Claims 7 and 13 have been amended to recite that “the filter is connected directly to the pump such that a rate of the pump determines a pressure on a blood side of the filter” and that the controller and the blood fluid circuit are further configured to pump blood such that blood is drawn through the arterial line and simultaneously pumped through the venous line continuously during a treatment.

The device of Polaschegg does not show at least the above noted features, since Polaschegg’s device relates to single needle systems in which blood is drawn in one phase and returned in a second phase. This contrasts the device of Polaschegg and the claimed systems and is thus sufficient to overcome the anticipation rejection.

In addition, the control system of Polaschegg is not otherwise taught to be combined with the system defined by the claims. The single needle system of Polaschegg is known and taught by Polaschegg to be susceptible to the recirculation pattern, which is the problem the invention of Polaschegg addresses by its pump control apparatus. Polaschegg teaches to provide the control mechanism described therein to single needle systems in order to avoid recirculation. Thus Applicants propose that a person of skill in the art faced with improving a continuous treatment system as defined in the claims would not look to the teachings of Polaschegg for his solution.

The controller of Polaschegg also differs from the control system of the invention in that it controls for a high volume flow rate during a short interval of time at the beginning of the arterial pumping phase in order to achieve a constant volume rate over a remainder of the arterial pumping phase. The control is over a temporary arterial pumping phase (rather than continuous over a constant volume flow rate) which creates a need for rapid achievement and maintenance of flow to a target rate. In continuous therapy, this need to start at a high volume rate but safeguard against too high a rate by providing an automatic pressure limit does not exist in continuous renal replacement therapy, which is the type of system defined in the claims. The controller of Polaschegg thus regulates the pump for high volume rate and then a constant volume rate in order to achieve maximum down time between pumping phases.

The claims recite that "the filter is connected directly to the pump such that the speed of the pump determines a pressure on a blood side of the filter" which further contrasts with the single needle system of Polaschegg. As Applicants' specification teaches, the claimed systems provide the untaught benefit that waste flow from the filter is maximized by regulating the arterial pressure flowing therein, a condition that is not associated with the single needle system of Polaschegg which pumps arterial blood into an expansion chamber.

For all the foregoing reasons, Applicants propose that a person of ordinary skill, in view of the prior art, would not consider Polaschegg to teach or suggest the claimed configuration of the controller, as defined by the present claims.

Claims 18 and 19 are added to provide more comprehensive protection for certain aspects. In particular, Claims 18 and 19 include features relating to the flow of waste in the renal replacement therapy system.

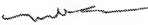
In view of the reasons discussed above, Applicants respectfully submit that Claims 7-9 and 11-19 distinguish patentably from the applied reference. A Notice of Allowance is thus respectfully requested.

Should the Examiner believe that any further action is necessary to place this application in better form for allowance, the Examiner is invited to contact Applicants' representative at the telephone number listed below.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 (T4342-14198US21) any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby requested.

Respectfully submitted,

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